

The Dog Who Lived

The “HotDog” Collar

First Lego League (FLL) Sand Lake Lions Team

Animal Allies Project.



StoryboardThat

How our Team came up with our animal allies project.

- Our group invited guest speakers from the Alaska Department of Fish and Game, Anchorage Animal Care and Control, Anchorage Fire Department, Bureau of Land Management, Friends of Pets, and the United States Geological Survey.
- We came up with 70 different project ideas and then we voted on which animal project to take on and solve.
- We had 14 team members so according to First Lego League rules we had to split into two teams. Each team did a project.
- We felt the best way to demonstrate the project was to do a skit.

The Problem

Each year thousands of dogs suffer injuries and die from the heat and cold. Some of the animals get hurt because of being left outside or by exercising too long in temperatures that are too hot or cold. But the most dangerous is when owners leave their pets in a car.

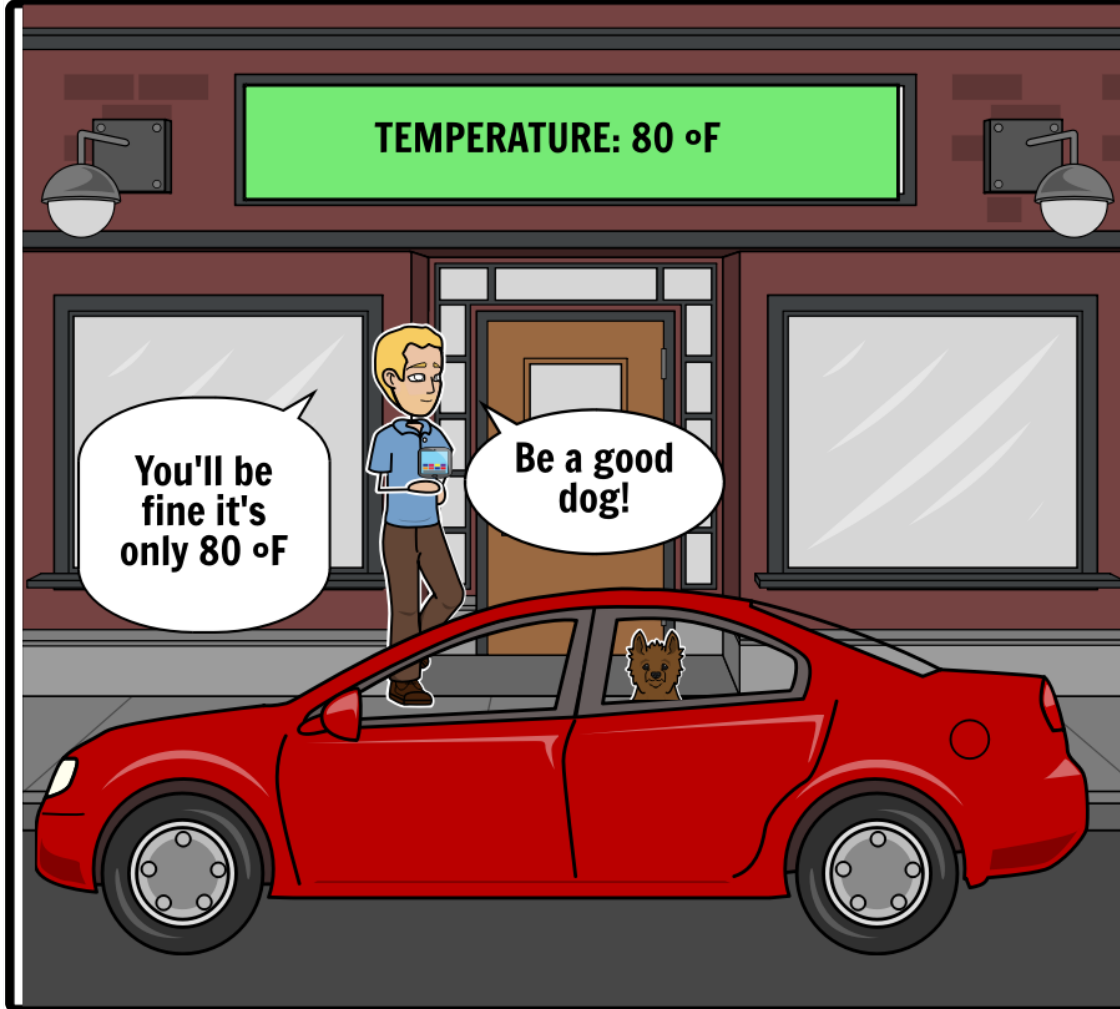
- Thousand of dogs suffer injuries and die from the heat and cold injuries each year.
- Most dangerous is when owners leave their dogs in a car.

How it Starts



- Many people run errands with their dogs.
- Most stores don't allow pets in them.

Don't Let Temperature Trick You



- Pet owners underestimate the how dangerous leaving a dog in a car can be.
- Even cracked car windows can be just as dangerous as leaving the windows rolled up.
- A dog's normal temperature is 102.5°F and at 104°F they are in danger.

Don't Let Temperature Trick You

DOGS CAN DIE IN HOT CARS IN JUST MINUTES, EVEN ON COMFORTABLE DAYS

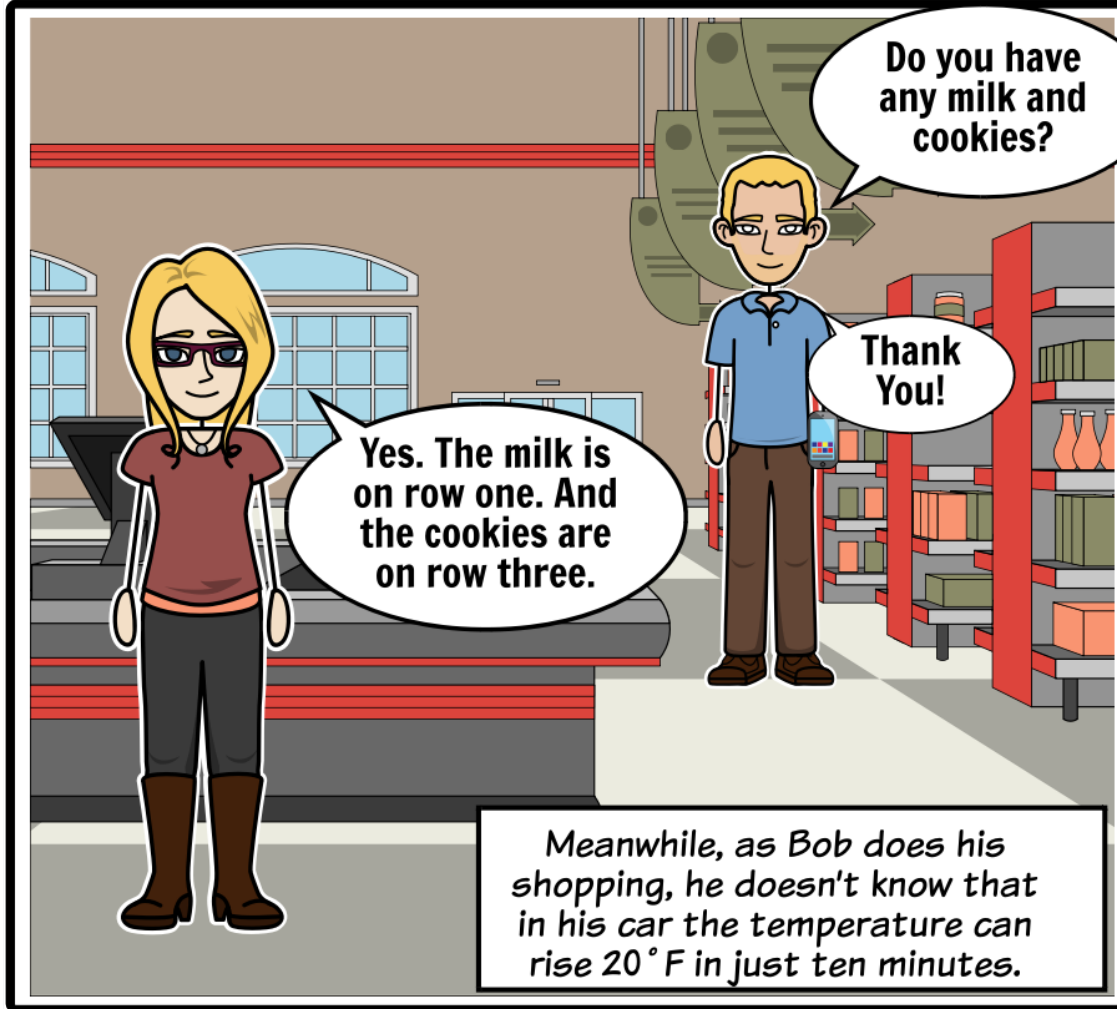
 **DOGS DIE**
EVERY SUMMER
EVEN ON 75° DAYS



On an 80° day in a very average car, a blue sedan with medium grey interior and cracked windows, the temperature inside the car rose to 123° in 60 minutes.

* Study published by Dr. Jan Nul, Department of Geosciences of San Jose State University

Underestimating Time



- People underestimate the amount of time errands take.
- Question?

The Dogs Problem



- In a hot car dogs can show signs of heat exhaustion.
- Heat exhaustion can lead to heat stroke and eventually death.

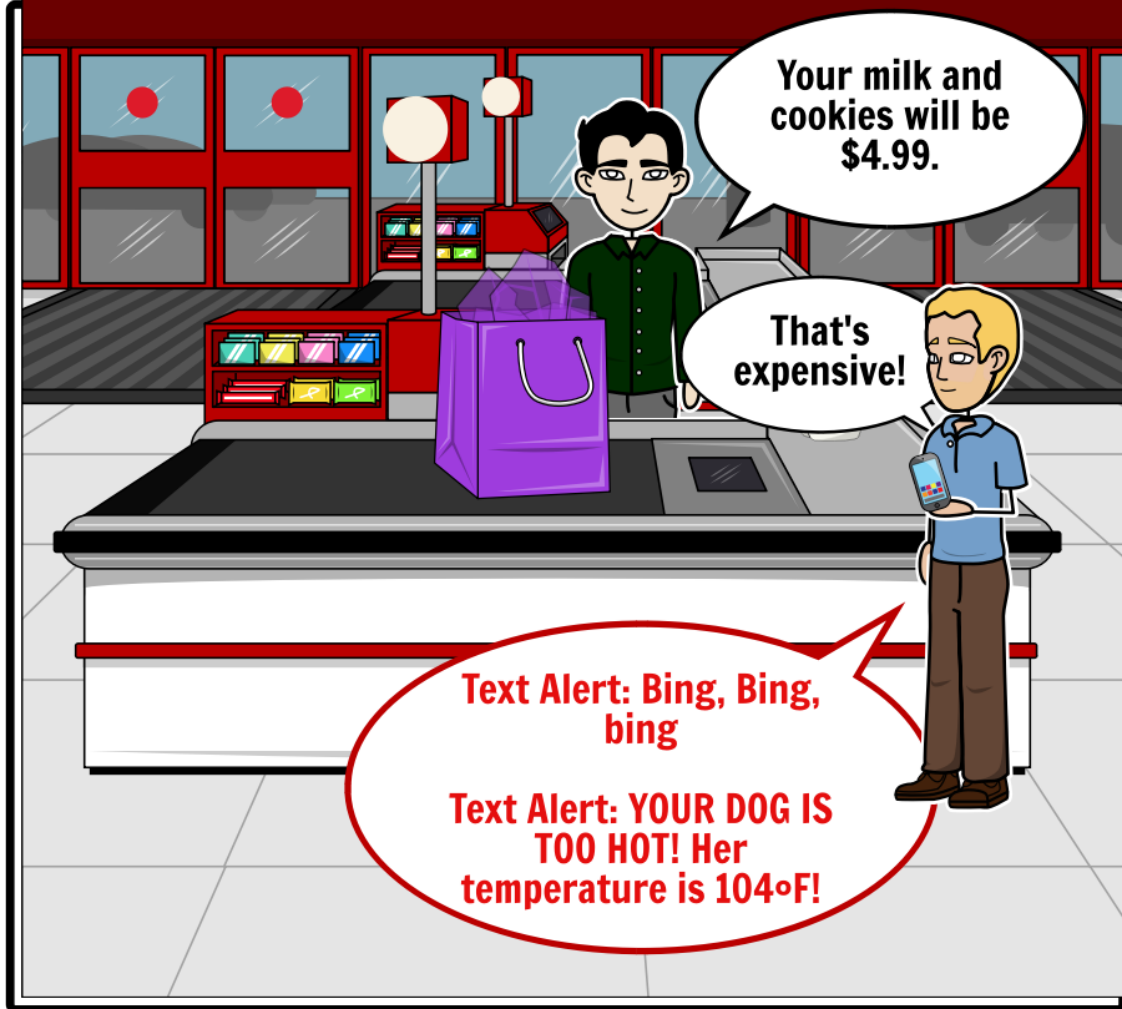
Symptoms



Symptoms of heat exhaustion in dogs are:

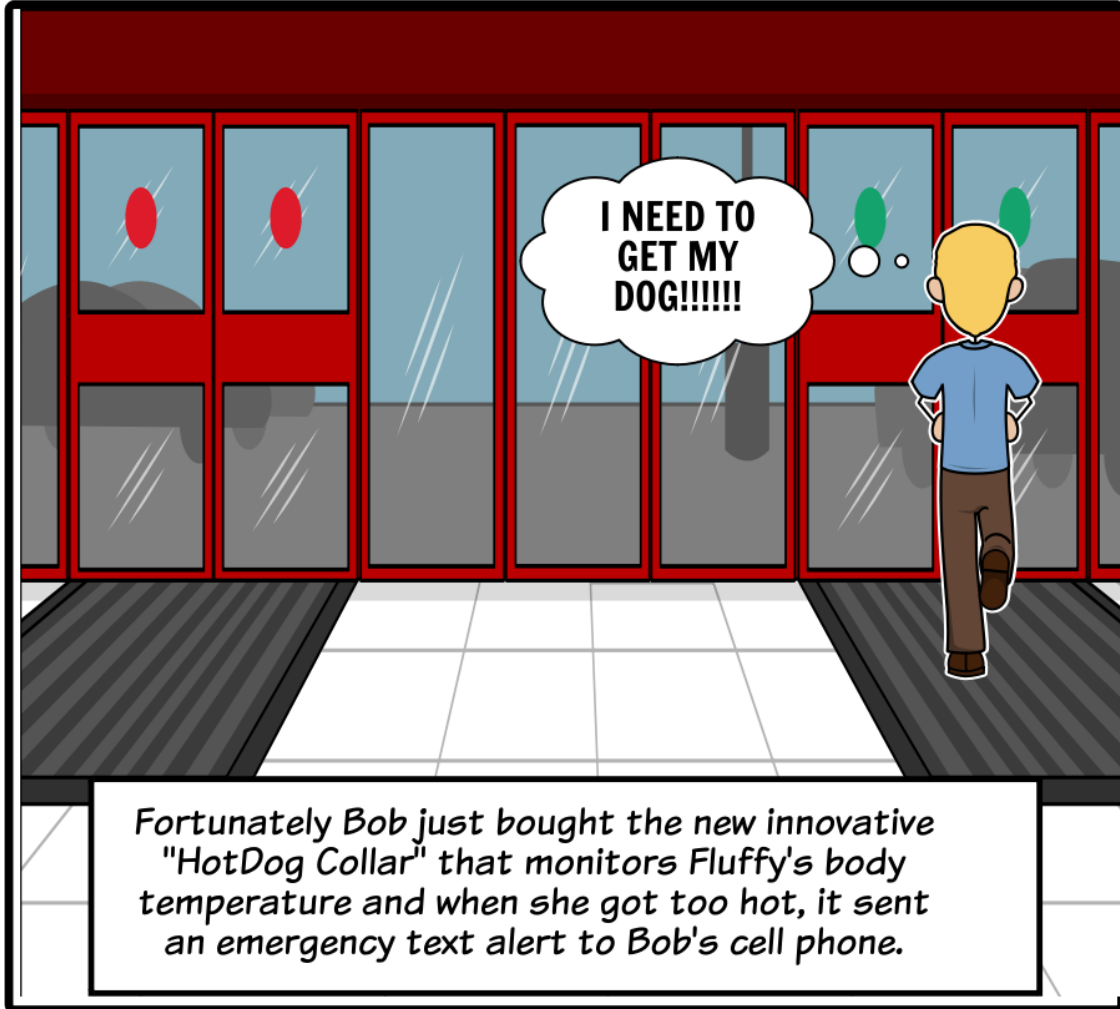
- Heavy panting
- Excessive drooling
- A rise in the body temperature
- Increased heart rate

The Alert



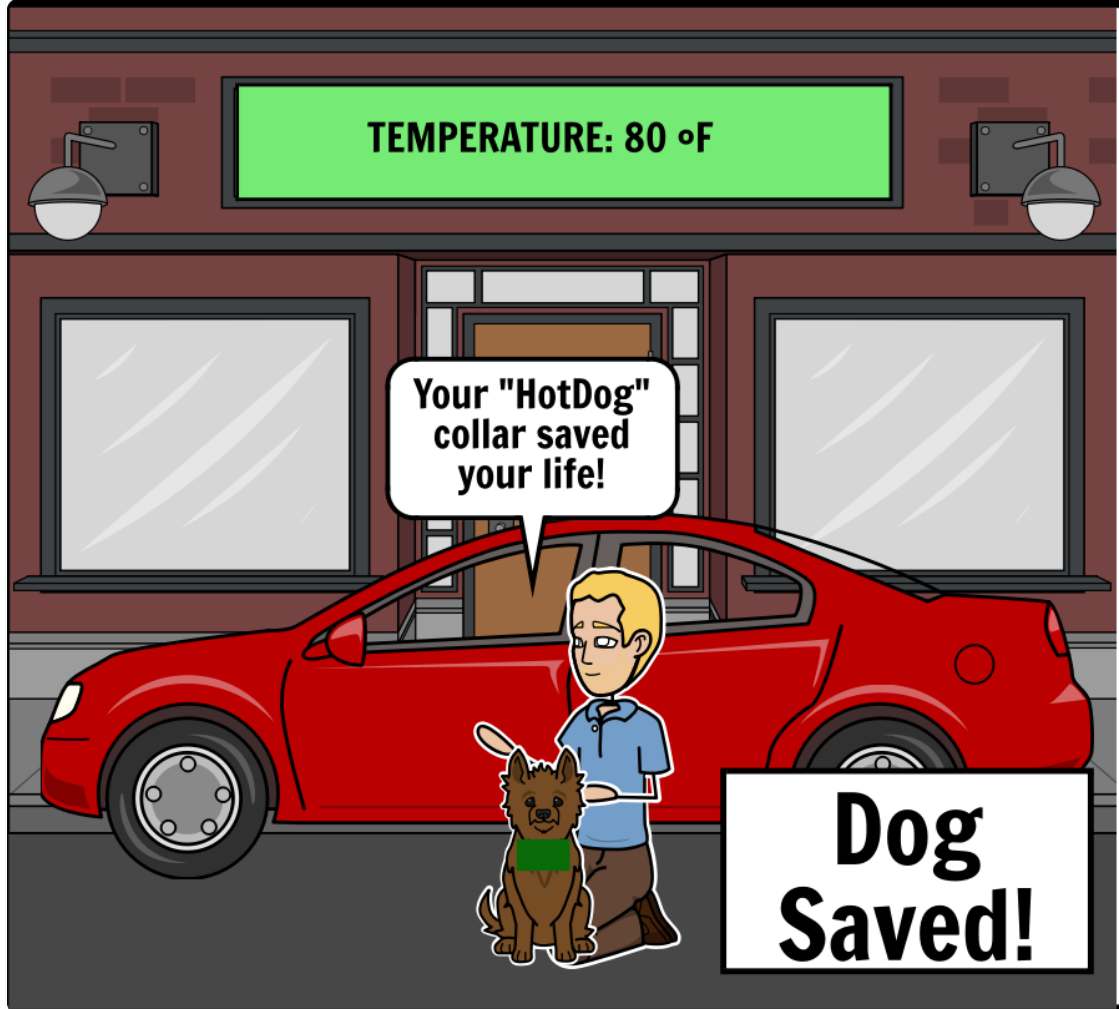
- The collar will measure the dogs temperature using prongs that touch the dogs skin so when the temperature hits a dangerous level it will send an alert to your cell phone.
- There are several collars that we found recently found that measure ambient air temperature, but ours would measure the dog's body temperature.

The Alert (Continued)



- The other collars have a limited range of 1,000 ft.
- The other collars don't work in cars.

Dog Saved



- The collar would also work in cold temperature alerting you on the dogs getting too cold.

"HotDog" Collar Features

- Monitors dog's body temperature using probes that contact the skin under their fur.
- Sends text alert to owners phone if the dog's body temperature gets too hot or too cold.
- If no internet connection the collar would make a sound.
- Waterproof.
- Different size boxes for small dogs and large dogs.
- Internet/data connections.
- Wireless battery charging.
- Different color options.

"HotDog" Collar



Collar Additional Options & Cost

- The cost would be approximately \$50-\$60. We researched GPS trackers that are similar in size and use smart phone technology since there is not a collar that uses our idea to compare it to.
- An additional option would be to add a GPS tracker with smart phone/computer app to find lost pets and provide owners contact information.

Expert Presenters

- Jim Stewart, Engineer, Anchorage Fire Department. Topic- Discussed rescuing and dealing with animals during house fires
- Todd Atwood, Polar Bear Biologist, USGS. Topic- Reviewed project concept and discussed facts about polar bears
- Michele Girault, Friends of Pets. Topic- Discussed domestic animal problems and Friends of Pets mission
- Susi Miller, Development Director, Alaska SPCA. Topic- Discussed domestic animal problems in the villages
- Jack Erickson, Fisheries Biologist, Commercial Fisheries, ADF&G. Topic- Wild animal issues and project concepts
- Laura Atwood, Public Relations Coordinator, Anchorage Animal Care and Control (ACC). Topic- Discussed domestic animal issues

More Expert Presenters

- Casey Burns, Biologist, BLM Topic- Gave real life examples of human and wildlife interactions causing problems for the wildlife.

References

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- VetzInsight “Hot cars melt dogs!: Leaving dogs in a hot car can be deadly”, Web
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